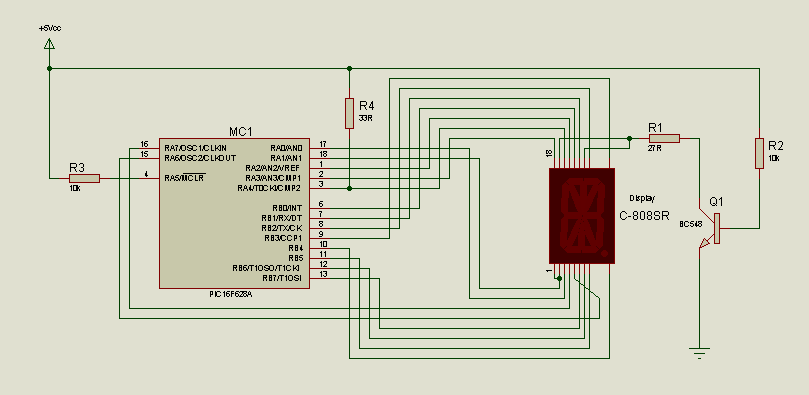
**ABECEDÁRIO PIC**

**Diagrama esquemático**



Código Fonte :

---------------------------------------------------------------------

; A B C D Á R I O

; PROGRAMA PARA GERAR O ABECEDÁRIO EM UM DISPLAY

; ALFANUMÉRICO DE 16 SEGMENTOS TIPO C-808SR, USANDO PIC16F628A

;

; ARQUIVOS DE DEFINICOES

#INCLUDE <P16F628A.INC>

\_\_CONFIG \_BOREN\_ON & \_CP\_OFF & \_PWRTE\_ON & \_WDT\_OFF & \_LVP\_OFF & \_MCLRE\_ON & \_INTOSC\_OSC\_NOCLKOUT

; PAGINACAO DE MEMÓRIA

#DEFINE BANK0 BCF STATUS,RP0

#DEFINE BANK1 BSF STATUS,RP0

; VARIAVEIS

CBLOCK 0x20

MASTER

SLAVE

SLAVE2

SLAVE3

ENDC

; VETOR DE RESET

ORG 0x00

GOTO INICIO

; INICIO DA INTERRUPCAO

ORG 0x04

RETFIE

; INICIO DO PROGRAMA

INICIO

CLRF PORTA

CLRF PORTB

BANK1

MOVLW B'00000000'

MOVWF TRISA

MOVWF TRISB

MOVWF INTCON

MOVLW B'10000000'

MOVWF OPTION\_REG

BANK0

MOVLW B'00000111'

MOVWF CMCON

; TEMPORIZADORES

GOTO MAIN

DELAY

MOVLW .8000

MOVWF MASTER

DL1

MOVLW .5000

MOVWF SLAVE

NOP

MOVWF SLAVE2

NOP

MOVWF SLAVE3

DL2

NOP

NOP

NOP

NOP

DECFSZ SLAVE,F

GOTO DL2

DL3

NOP

NOP

NOP

NOP

DECFSZ SLAVE2,F

GOTO DL3

DL4

NOP

NOP

NOP

DECFSZ SLAVE3,F

GOTO DL4

DECFSZ MASTER,F

GOTO DL1

; DUPLICACAO DO DELAY

MOVLW .8000

MOVWF MASTER

DL11

MOVLW .5000

MOVWF SLAVE

NOP

MOVWF SLAVE2

NOP

MOVWF SLAVE3

DL21

NOP

NOP

NOP

NOP

DECFSZ SLAVE,F

GOTO DL21

DL31

NOP

NOP

NOP

NOP

DECFSZ SLAVE2,F

GOTO DL31

DL41

NOP

NOP

NOP

DECFSZ SLAVE3,F

GOTO DL41

DECFSZ MASTER,F

GOTO DL11

; SEGUNDA DUPLICACAO DO DELAY

MOVLW .8000

MOVWF MASTER

DL12

MOVLW .5000

MOVWF SLAVE

NOP

MOVWF SLAVE2

NOP

MOVWF SLAVE3

DL22

NOP

NOP

NOP

NOP

DECFSZ SLAVE,F

GOTO DL22

DL32

NOP

NOP

NOP

NOP

DECFSZ SLAVE2,F

GOTO DL32

DL42

NOP

NOP

NOP

DECFSZ SLAVE3,F

GOTO DL42

DECFSZ MASTER,F

GOTO DL12

RETURN

DELAY\_APAGAMENTO

MOVLW .200

MOVWF MASTER

DL1\_APAGA

MOVLW .200

MOVWF SLAVE

DL2\_APAGA

NOP

NOP

DECFSZ SLAVE,F

GOTO DL2\_APAGA

DECFSZ MASTER,F

GOTO DL1\_APAGA

MOVLW B'00000000'

MOVWF PORTA

NOP

MOVLW B'00000000'

MOVWF PORTB

RETURN

; ESTE DELAY É PARA INICIO E FIM DO ABCEADRIO

DELAY\_FINAL

MOVLW .8000

MOVWF MASTER

DLFA

MOVLW .5000

MOVWF SLAVE

NOP

MOVWF SLAVE2

NOP

MOVWF SLAVE3

DLFB

NOP

NOP

NOP

NOP

DECFSZ SLAVE,F

GOTO DLFB

DLFC

NOP

NOP

NOP

NOP

DECFSZ SLAVE2,F

GOTO DLFC

RETURN

; ROTINA PRINCIPAL

MAIN

; INICIO

MOVLW B'10011000'

MOVWF PORTA

MOVLW B'11110001'

MOVWF PORTB

CALL DELAY\_FINAL

CALL DELAY\_APAGAMENTO

CALL DELAY\_APAGAMENTO

MOVLW B'10011000'

MOVWF PORTA

MOVLW B'11110001'

MOVWF PORTB

CALL DELAY\_FINAL

CALL DELAY\_APAGAMENTO

CALL DELAY\_APAGAMENTO

MOVLW B'10011000'

MOVWF PORTA

MOVLW B'11110001'

MOVWF PORTB

CALL DELAY\_FINAL

CALL DELAY\_APAGAMENTO

CALL DELAY\_APAGAMENTO

MOVLW B'10011000'

MOVWF PORTA

MOVLW B'11110001'

MOVWF PORTB

CALL DELAY\_FINAL

CALL DELAY\_APAGAMENTO

CALL DELAY\_APAGAMENTO

MOVLW B'10011000'

MOVWF PORTA

MOVLW B'11110001'

MOVWF PORTB

CALL DELAY\_FINAL

CALL DELAY\_APAGAMENTO

CALL DELAY\_APAGAMENTO

; A

MOVLW B'01010111'

MOVWF PORTA

MOVLW B'00000011'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; B

MOVLW B'00010110'

MOVWF PORTA

MOVLW B'11001110'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; GOTO MAIN

; C

MOVLW B'01000011'

MOVWF PORTA

MOVLW B'00001100'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; GOTO MAIN

; D

MOVLW B'00000110'

MOVWF PORTA

MOVLW B'11001110'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; E

MOVLW B'01010011'

MOVWF PORTA

MOVLW B'00001101'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; F

MOVLW B'01000011'

MOVWF PORTA

MOVLW B'00000001'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; G

MOVLW B'01010011'

MOVWF PORTA

MOVLW B'00001110'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; H

MOVLW B'01010101'

MOVWF PORTA

MOVLW B'00000011'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; I

MOVLW B'00000010'

MOVWF PORTA

MOVLW B'11001100'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; J

MOVLW B'01000100'

MOVWF PORTA

MOVLW B'00001110'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; K

MOVLW B'01001001'

MOVWF PORTA

MOVLW B'00010001'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; L

MOVLW B'01000001'

MOVWF PORTA

MOVLW B'00001100'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; M

MOVLW B'11001101'

MOVWF PORTA

MOVLW B'00000010'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; N

MOVLW B'11000101'

MOVWF PORTA

MOVLW B'00010010'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; O

MOVLW B'01000111'

MOVWF PORTA

MOVLW B'00001110'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; P

MOVLW B'01010111'

MOVWF PORTA

MOVLW B'00000001'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; Q

MOVLW B'01000111'

MOVWF PORTA

MOVLW B'00011110'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; R

MOVLW B'01010111'

MOVWF PORTA

MOVLW B'00010001'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; S

MOVLW B'00010011'

MOVWF PORTA

MOVLW B'00001111'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; T

MOVLW B'00000010'

MOVWF PORTA

MOVLW B'11000000'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; U

MOVLW B'01000101'

MOVWF PORTA

MOVLW B'00001110'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; V

MOVLW B'01001001'

MOVWF PORTA

MOVLW B'00100000'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; W

MOVLW B'01000101'

MOVWF PORTA

MOVLW B'00110010'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; X

MOVLW B'10001000'

MOVWF PORTA

MOVLW B'00110000'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; Y

MOVLW B'10001000'

MOVWF PORTA

MOVLW B'01000000'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; Z

MOVLW B'00001010'

MOVWF PORTA

MOVLW B'00101100'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; 1

MOVLW B'00001100'

MOVWF PORTA

MOVLW B'00000010'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; 2

MOVLW B'01010110'

MOVWF PORTA

MOVLW B'00001101'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; 3

MOVLW B'00010110'

MOVWF PORTA

MOVLW B'00001110'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; 4

MOVLW B'00010101'

MOVWF PORTA

MOVLW B'00000011'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; 5

MOVLW B'00010011'

MOVWF PORTA

MOVLW B'00001111'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; 6

MOVLW B'01010001'

MOVWF PORTA

MOVLW B'00001111'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; 7

MOVLW B'00000110'

MOVWF PORTA

MOVLW B'00000010'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; 8

MOVLW B'01010111'

MOVWF PORTA

MOVLW B'00001111'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; 9

MOVLW B'00010111'

MOVWF PORTA

MOVLW B'00000011'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; 0

MOVLW B'01000111'

MOVWF PORTA

MOVLW B'00001110'

MOVWF PORTB

CALL DELAY

CALL DELAY\_APAGAMENTO

; ROTINA FINAL

MOVLW B'00000001'

MOVWF PORTA

MOVLW B'00000000'

MOVWF PORTB

CALL DELAY\_FINAL

CALL DELAY\_APAGAMENTO

MOVLW B'00000010'

MOVWF PORTA

MOVLW B'00000000'

MOVWF PORTB

CALL DELAY\_FINAL

CALL DELAY\_APAGAMENTO

MOVLW B'00000100'

MOVWF PORTA

MOVLW B'00000000'

MOVWF PORTB

CALL DELAY\_FINAL

CALL DELAY\_APAGAMENTO

MOVLW B'00000000'

MOVWF PORTA

MOVLW B'00000010'

MOVWF PORTB

CALL DELAY\_FINAL

CALL DELAY\_APAGAMENTO

MOVLW B'00000000'

MOVWF PORTA

MOVLW B'00001100'

MOVWF PORTB

CALL DELAY\_FINAL

CALL DELAY\_APAGAMENTO

MOVLW B'01000000'

MOVWF PORTA

MOVLW B'00000000'

MOVWF PORTB

CALL DELAY\_FINAL

CALL DELAY\_APAGAMENTO

GOTO MAIN

; FIM DO PROGRAMA

END